

March 2009
FACT SHEET
Authorization to Discharge under the
National Pollutant Discharge Elimination System
for the
BUREAU OF INDIAN AFFAIRS -- NENAHNEZAD COMMUNITY SCHOOL
WASTEWATER TREATMENT PLANT

NPDES Permit No. NN0020800*

Applicant address: U.S. Department of the Interior
Bureau of Indian Affairs (BIA)
Navajo Regional Office
Division of Environmental, Cultural & Safety Management
P.O. Box 1060
Gallup, NM 87305

Facility contact: Jean Romancito, Environmental Protection Specialist
(505) 863-8330

Facility Address: Nenahnezad Community School
P.O. Box 337
Fruitland, NM 87416

Facility Contact: Clarence Chavez, School Maintenance
(505) 598-5241

I. Summary

The BIA was issued a National Pollutant Discharge Elimination System (NPDES) Permit (No. NM0020800) on November 30, 2000 for its Nenahnezad Community School wastewater treatment facility, pursuant to the EPA regulations set forth in Title 40, Code of Federal Regulations (CFR) Part 122.21. The permit was effective December 16, 2000, through midnight December 17, 2005. BIA applied to the U.S. Environmental Protection Agency (US EPA) Region 9 for reissuance on August 26, 2005 and reapplied again on September 4, 2008. Pursuant to 40 CFR 122.6, the 2000 permit has been administratively continued pending reissuance by the EPA. All the terms and conditions of the 2000 permit are in effect until the reissuance of a new permit. This fact sheet is based on information provided by the discharger through its application and discharge data submittal, along with the appropriate laws and regulations.

**The National Pollutant Discharge Elimination System (NPDES) permit number for this facility was changed from NM0020800 to NN0020800 in December 2005. The discharger was notified of this change. The two-letter prefix of the permit number is being replaced with NN for its state code to provide for more efficient data management*

Pursuant to Section 402 of the Clean Water Act (CWA), the US EPA is proposing issuance of an NPDES permit renewal to the BIA (permittee) for the discharge of treated wastewater to the lagoons across Bitsui Wash which flows into the San Juan River, a water of the United States.

II. Description of Facility

The BIA Nenahnezad Community School wastewater treatment facility is located in Fruitland, San Juan County, New Mexico, which is in the northern portion of the Navajo Nation. It is adjacent to the school property. The facility serves a population of approximately 525, receives only domestic sewage and has a design flow of 0.024 million gallons per day (MGD). The facility consists of an extended aeration package plant, equipped with UV treatment, which is connected to a backup four-cell, gravity flow evaporation system. The facility discharges treated wastewater through a 6-inch pipe (Outfall Number 001) into Bitsui Wash, a tributary to the San Juan River. This wash is reportedly perennial (sourced by overflow from an irrigation canal and possibly a natural seep).

The system was recently upgraded. The holding tanks were sandblasted and resurfaced; blowers, piping and pumps replaced; and, a new ultra-violet disinfection system was installed. According to the September 2008 permit application, the connected sewage lagoon is designated as a backup wastewater facility and has not discharged to the San Juan River for over 10 years.

Although BIA is a federal facility and not a publicly-owned treatment works (POTW), EPA will be proposing federal discharge limits as those that are applicable to POTWs. Any sampling and monitoring under the proposed permit shall be performed at Outfall No. 001.

III. Basis of Proposed Permit Requirements

Section 301 of the CWA established a required performance level, referred to as “secondary treatment,” that all POTWs were required to meet by July 1, 1977. Federal secondary treatment effluent standards for POTWs are contained in Section 301(b)(1)(B) of the CWA. Implementing regulations for Section 301(b)(1)(B) are found at 40 CFR Part 133. The CWA requires POTWs to meet performance-based requirements based on available wastewater treatment technology. These technology-based effluent limits apply to all municipal wastewater treatment plants, and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD₅ and TSS. The requirements contained in the draft permit are necessary to prevent violations of applicable treatment standards.

In accordance with 40 CFR 122.44(d), the need for discharge limitations for all pollutants that may impact applicable water quality criteria and water quality standards must be evaluated. As part of this evaluation, discharge limitations are based on application of the water quality standards. EPA approved the 1999 Navajo Nation Surface Water Quality Standards (“NNSWQS”), on March 23, 2006. The NNSWQS were revised and promulgated by NNEPA on July 30, 2004 for waters of the Navajo Nation. The approved 1999 Navajo Nation water quality standards and 2004 revisions will be used on a best professional judgment (ABPJ@) basis for purposes of developing water quality based effluent limitations. The requirements contained in the proposed permit are necessary to prevent violations of applicable water quality standards.

IV. Designated Uses of the Receiving Water

The designated uses of the receiving water (perennial Bitsui Wash, a tributary of the San Juan River) are defined by the Navajo Nation's Surface Water Quality Standards as domestic, primary and secondary human contact, agricultural water supply, cold water habitat, ephemeral warm water habitat, and livestock and wildlife watering (Table 204.1, pg. 20).

V. Determination of Effluent Limitations, Monitoring Requirements and Reporting Requirements

A. Flow Rates

Under the proposed permit, there is no flow limit but the flows must be monitored and reported. The monitoring frequency is once per month, consistent with the previous permit.

B. Five-Day Biochemical Oxygen Demand (BOD₅)

Under the proposed permit, the discharge shall not exceed a weekly average of 45 mg/l and monthly average of 30 mg/l BOD₅, and shall achieve no less than a monthly average rate of 85% removal. These limits are required under 40 CFR Section 133.102(a). The limits are designated as 30-day and 7-day averages since the facility operates a POTW, and it would be impracticable to do otherwise [40 CFR 122.45(d)]. The proposed secondary treatment effluent standards are applicable for package treatment plants and would replace the previous limits which were for treatment lagoon systems.

Under 40 CFR Section 122.45 (f), mass limits are required for BOD₅. Based upon the 0.024 MGD flow, the mass limits for BOD₅ are based on the following calculations:

Monthly Average

$$\frac{0.024 \text{ MG}}{\text{day}} \times \frac{30 \text{ mg}}{\text{l}} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 2.7 \text{ kg/day}$$

Weekly Average

$$\frac{0.024 \text{ MG}}{\text{day}} \times \frac{45 \text{ mg}}{\text{l}} \times \frac{8.345 \text{ lb/MG}}{1 \text{ mg/l}} \times \frac{0.45 \text{ kg}}{\text{lb}} = 4.1 \text{ kg/day}$$

The daily maximum will also be monitored and reported. The monitoring frequency is once per month, consistent with the previous permit.

C. Total Suspended Solids (TSS)

Under the proposed permit, the discharge shall not exceed a weekly average of 45 mg/l and monthly average of 30 mg/l TSS, and shall achieve no less than a monthly average rate of 85% removal. These limitations are consistent with 40 CFR Section 133.102(b). Mass limit

requirements in accordance with 40 CFR 122.45(f) have also been set in the proposed permit. Mass loading shall not exceed a 7-day average of 4.1 kg/day and a 30-day average of 2.7 kg/day. The monitoring frequency is once per month, consistent with the previous permit.

D. Determination of Effluent Limitation for *Escherichia coli* (*E. coli*)

In the proposed permit, the monthly geometric mean of *E. coli* bacteria shall not exceed 126/100 ml and 235/100 ml as a single sample maximum. These limits are based on the 2004 NNSWQS for domestic water supply and primary human contact (p. 24). The previous permit utilized fecal coliform bacteria (FCB) values but the amended NNSWQS replaced FCB with *E. coli*. The monitoring frequency is once per month, consistent with the previous permit.

E. Total Residual Chlorine (TRC)

The permittee had discontinued chlorination and is now using ultra-violet disinfection system. Therefore, the TRC limit has been removed from the permit.

F. Total Dissolved Solids (TDS)

The regulations at 40 CFR 122.44(i) allow requirements for monitoring as determined to be necessary. The monitoring frequency is once per month, consistent with the previous permit.

G. Total Ammonia Nitrogen (NH₃-N)

The proposed permit establishes a monitoring and reporting requirement for total ammonia nitrogen, which includes the ammonium ion (NH₄⁺) and free ammonia (NH₃). This requirement replaces that of ammonia in the previous permit. The monitoring frequency is once per quarter. If analytical results for the first four quarters reveal ammonia levels are below EPA's National Water Quality Criteria for ammonia, the monitoring frequency will decrease to once per year, consistent with the previous permit. The regulations at 40 CFR Part 122.44(i) allow requirements for monitoring as determined to be necessary. The criteria for ammonia are pH and temperature dependent, and therefore, measurements for ammonia shall taken concurrently with temperature and pH measurements.

H. pH

The proposed permit requires that effluent pH not fall below 6.5 or above 9.0 standard pH units, consistent with the NNSWQS. The monitoring frequency is once per month, consistent with the previous permit.

I. Temperature

The proposed permit establishes a monitoring requirement for temperature, to be taken concurrently with measurements for pH and total ammonia nitrogen, as ammonia toxicity is pH and temperature dependent. The monitoring frequency is once per quarter, consistent with the previous permit.

J. Priority Pollutant Scan

The proposed permit establishes a monitoring requirement for the full list of priority pollutants as listed in the Code of Federal Regulations (CFR) at 40 CFR Part 423, Appendix A. No limit is set at this time. Should the results reveal levels below EPA's National Water Quality Criteria for priority pollutants, monitoring will no longer be required of the permittee.

VI. Reporting

The proposed permit requires discharge data obtained during the previous three months to be summarized on monthly DMR forms and reported quarterly. If there is no discharge for the month, report AC@ in the No Discharge box on the DMR form for that month. These reports are due January 28, April 28, July 28, and October 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the EPA Region 9 and the Navajo Nation EPA.

VII. General Standards

The proposed permit sets general standards that are narrative water quality standards contained in the Navajo Nation Water Quality Standards, Section 203. These general standards are set forth in Section B. General Discharge Specifications of the permit.

VIII. Permit Reopener

At this time, we have no reason to establish any other water quality-based limits. Should any monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursion above a water quality criteria, the permit may be reopened for the imposition of water quality-based limits and/or whole effluent toxicity limits. The proposed permit may be modified, in accordance with the requirements set forth at 40 CFR 122.44 and 124.14, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new Tribal water quality standards.

IX. Biosolids Requirements

The permittee shall submit a report 60 days prior to disposal of biosolids. The report shall discuss the quantity of biosolids produced, the treatment applied to biosolids including process parameters, disposal methods, and, if land applied, analyses for Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Zinc, and Selenium, and organic-N, ammonium-N, and nitrate-N, all expressed in mg/kg biosolids on a 100% dry weight basis. The permittee shall comply with all standards for biosolids use and disposal at Section 405(d) of the CWA, and 40 CFR Parts 257, 258 and 503.

X. Threatened and Endangered Species and Critical Habitat

A. Background:

Section 7 of the Endangered Species Act (ESA) of 1973 requires Federal agencies such as EPA to ensure, in consultation with the U.S. Fish and Wildlife Service (FWS), that any actions authorized, funded or carried out by the Agency are not likely to jeopardize the continued existence of any Federally- listed endangered or threatened species or adversely modify or destroy critical habitat of such species.

Since the issuance of NPDES permits by EPA is a Federal action, consideration of a permitted discharge and its effect on any listed species is appropriate. The proposed NPDES permit authorizes the discharge of treated domestic wastewater into receiving water named Bitsui Wash, a tributary of the San Juan River, a water of the United States.

The information below is listed in the Navajo Nation=s Department of Fish & Wildlife B Natural Heritage Program (NHP) database. The FWS has deferred all of its survey and information collection in the Navajo Nation to the Navajo Nation NHP.

In November 2005, the Navajo Nation NHP had identified eight (8) listed, proposed or candidate T or E species that may potentially occur within the facility boundary or on the 7.5 minute quadrangle(s) of the facility boundary. The listed species are listed as follows:

Names (common and scientific)	Status
Mountain Plover (<i>Charadrius montanus</i>)	Proposed T
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	E
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	T
Black-footed ferret (<i>Mustela nigripes</i>)	E
Colorado pikeminnow (<i>Ptychocheilus lucius</i>)	T
Razorback sucker (<i>Xyrauchen texanus</i>)	E
Mancos Milk-vetch (<i>Astragalus humillimus</i>)	Candidate
Mesa Verde cactus (<i>Sclerocactus mesae-verdae</i>)	T

The NHP had also identified eight (8) Navajo endangered species as follows:

Names (common and scientific)
Golden Eagle (<i>Aquila chrysaetos</i>)
Ferruginous Hawk (<i>Buteo regalis</i>)
Bluehead sucker (<i>Catostomus discobolus</i>)
Mottled sculpin (<i>Cottus bairdi</i>)
Peregrine Falcon (<i>Falco peregrinus</i>)
Roundtail chub (<i>Gila robusta</i>)
Northern Leopard Frog (<i>Rana pipiens</i>)
Naturita Milk-vetch (<i>Altragalus naturitensis</i>)

B. EPA=s Finding:

This permit authorizes the discharge of treated wastewater in conformance with the federal secondary treatment regulations and the Navajo Nation Surface Water Quality Standards. These standards are applied in the permit both as numeric and narrative limits. The standards are designed to protect aquatic species, including threatened and endangered species, and any discharge in compliance with these standards should not adversely impact any threatened and endangered species.

EPA believes that effluent released in compliance with this permit will have no effect on any federally-listed threatened or endangered species or its critical habitat that may be present in the vicinity of the discharge outfall. The treatment facility has been in existence for some time, and no new construction or modifications will be made to it due to the proposed NPDES permit. Therefore, no requirements specific to the protection of endangered species are proposed in the permit. EPA may decide that changes to the permit may be warranted based on receipt of new information. A re-opener clause has been included should new information become available to indicate that the requirements of the permit need to be changed.

XI. Administrative Information -- Public Notice, Public Comments, and Requests for Public Hearings

In accordance with 40 CFR 124.10, public notice shall be given by the U.S. EPA that a draft NPDES permit has been prepared by mailing a copy of the notice to the permit applicant and other Federal and State agencies, and through publication of a notice in a daily or weekly newspaper within the area affected by the facility. The public notice shall allow at least 30 days for public comment on the draft permit.

In accordance with 40 CFR 124.11 and 12, during the public comment period, any interested person may submit written comments on the draft permit, and may request a public hearing if no hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. In accordance with 40 CFR 124.13, all persons must raise all reasonably ascertainable issues and submit all reasonably available arguments supporting their position within thirty (30) days from the date of the public notice. Comments may be received either in person or mailed to:

U.S. Environmental Protection Agency, Region IX
NPDES Permits Office (WTR-5)
Attn: Linh Tran
75 Hawthorne Street
San Francisco, CA 94105
Telephone: (415) 972-3511

Interested persons may obtain further information, including copies of the draft permit, fact sheet/statement of basis, and the permit application, by contacting Linh Tran (WTR-5) at the U.S. EPA address, above. Copies of the administrative record (other than those which U.S. EPA maintains as confidential) are available for public inspection between 8:00 a.m. and 4:30 p.m., Monday through Friday (excluding federal holidays).

In accordance with 40 CFR 124.12, the U.S. EPA shall hold a public hearing when, on the basis of requests, a significant degree of public interest in the draft permit exists. The Director may also hold a public hearing when, for instance, such a hearing might clarify one or more issues involved in the permit decision. Public notice of such hearing shall be given as specified in 40 CFR 124.10.